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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/270,673	03/16/1999	TAKAHISA UEDA		2804

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EXAMINER

MIGGINS, MICHAEL C

ART UNIT PAPER NUMBER

1772

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/270,673	Applicant(s) UEDA ET AL.4	
	Examiner Michael C. Miggins	Art Unit 1772	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**WITHDRAWN REJECTIONS**

1. All of the 35 USC 103(a) rejections set forth in the non-final office action of 12/19/2003, pages 3-5, paragraphs 6-11 have been withdrawn.

**REJECTIONS REPEATED**

2. There are no rejections repeated.

***Response to Arguments***

3. Applicant's arguments with respect to claims 22-33 have been considered but are moot in view of the new ground(s) of rejection.

**NEW REJECTIONS**

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 22 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 is indefinite for containing the limitation "mainly consists of", the limitation is unclear because it is not know whether the limitation recites open or closed language (e.g. "comprising" or "consisting").

Claim 29 is indefinite because it depends from claim 18 which has been canceled. For purposes of examination the claim has been construed as depending from claim 22.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22-23, 26-27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630).

Braus et al. teach an annular sliding (since guide bushings and shells are taught, see column 2, lines 7-8 and column 2, lines 5-51) fluoroplastics member having a composite structure which mainly consists of fluorine plastics (PTFE) (column 3, lines 48-58) and short fibers (aramid) (column 4, lines 3-15) (applies to instant claims 22 and 27).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail to disclose a sliding member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large or oriented in an axial direction and wherein the member contains a lubricant.

Wegner et al. disclose a sliding member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large (since the short fibers, column 4, lines 61-68, are all oriented in the longitudinal direction or transverse to the longitudinal direction, column 5, lines 18-27, column 5, lines 45-50 and applicant claims an axial direction) or oriented in an axial direction (column 5, lines 45-50) and wherein the member contains a lubricant (column 3, lines 19-26) for the purpose of providing high resistance to fatigue, wear resistance and bonding stability (column 2, lines 1-16) (applies to instant claims 22-23, 26-27 and 33).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a sliding member wherein 20 or 50 or more weight percent of short fibers by weight of a total amount of said short fibers are oriented in a direction along which a burden of a load is large or oriented in an axial direction and wherein the member contains a lubricant in the annular sliding member of Braus et al. in order to provide high resistance to fatigue, wear resistance and bonding stability as taught or suggested by Wegner et al..

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630), as applied to claims 22-23, 26-27 and 33 above, and further in view of Hartel et al. (U.S. Patent No. 4,942,075).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail to disclose that the fibers are oriented in a circumferential direction.

Hartel et al. disclose fibers oriented in a circumferential direction in an annular body (column 3, lines 22-41 and Fig. 1) for the purpose of providing increased load strength (column 2, lines 17-63).

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided wherein the fibers are oriented in a circumferential direction in the annular sliding member of Braus et al. in order to provide increased load strength as taught or suggested by Hartel et al..

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630), as applied to claims 22-23, 26-27 and 33 above, and further in view of Stiff et al. (U.S. Patent No. 3,675,980).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail disclose wherein the fibers are oriented in a spiral direction.

Stiff et al. disclose an annular member wherein the fibers are oriented in a spiral direction (column 5, lines 1-65) for the purpose of providing improved load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided wherein the fibers are oriented in a spiral direction in the annular sliding member of Braus et al. in order to provide improved load strength as taught or suggested by Stiff et al..

10. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630), as applied to claims 22-23, 26-27 and 33 above, and further in view of Runton et al. (U.S. Patent No. 3,000,076).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail to disclose wherein the composite structure is a structure in which a number of fluoride plastics layers containing fibers are stacked in a radial direction, and each of said stacked layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally coupled to one another.

Runton et al. disclose a composite structure which is a structure in which a number of fluoride plastics layers containing fibers are stacked in a radial direction, and each of said stacked layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally coupled to one another (column 2, lines 1-71 and Figs. 1-6) (applies to instant claims 28-29) for the purpose of providing improved load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided a composite structure which is a structure in which a number of fluoride plastics layers containing fibers are stacked in a radial direction, and each of said stacked layers has a wavy sectional shape which undulates in an axial direction, wherein overlapping faces of said layers are integrally

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coupled to one another in the annular sliding member of Braus et al. in order to provide improved load strength as taught or suggested by Runton et al..

11. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630), as applied to claims 22-23, 26-27 and 33 above, and further in view of Board, Jr. (U.S. Patent No. 3,950,599).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail to disclose an annular member wherein plural filaments (aramid) are stitched to said composite structure.

Board, Jr. disclose an annular member wherein plural filaments (aramid) are stitched to said composite structure (column 6, lines 33-68 and Figs. 1-3) (applies to instant claims 30-31) for the purpose of providing improved load strength.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided an annular member wherein plural filaments (aramid) are stitched to said composite structure in the annular sliding member of Braus et al. in order to provide improved load strength as taught or suggested by Board, Jr..

12. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braus et al. (U.S. Patent No. 4,847,135) in view of Wegner et al. (U.S. Patent No. 4,540,630), as



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applied to claims 22-23, 26-27 and 33 above, and further in view of Sumiyoshi et al.

(U.S. Patent No. 4,559,248).

Braus et al. disclose applicant's invention substantially as claimed. However, Braus et al. fail to disclose an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet.

Sumiyoshi et al. disclose an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet (column 3, lines 1-68, column 7, lines 1-68 and Figs. 1-4) for the purpose of providing improved heat resistance.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided an annular member wherein at least one surface of said annular sliding fluoroplastics member is covered with an expanded graphite sheet in the annular sliding member of Braus et al. in order to provide improved heat resistance as taught or suggested by Sumiyoshi et al..

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is (571) 272-1494. The examiner can normally be reached on Monday-Friday; 1:30-10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pyon Harold can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Miggins  
Examiner  
Art Unit 1772

A handwritten signature in black ink, appearing to read "Michael C. Miggins", with a long horizontal flourish extending to the right.

MCM  
September 2, 2004